March 2, 2009

C. Wayne Ives, P.G., Hydrogeologist Instream Flow Specialist Watershed Management Bureau NH Department of Environmental Services PO Box 95 - 29 Hazen Drive Concord, NH 03302-0095

RE: Lamprey River Protected Instream Flow Study Comments

Dear Mr. Ives:

The Board of Directors of the Lamprey River Watershed Association has followed the In-stream Flow study process for the past several years and has been looking forward to the completion of this draft report.

With the completion of the Flow Study draft report, we would like to offer the following comments:

- 1. The report seems to say that the river will be managed for an absolute minimum low flow at either 16 cfs or 4 cfs either of which seems entirely too low. As noted in the report, the 4 cfs level is nearly at the lowest recorded flow level in 30 years. Why would we allow the river to get this low under managed conditions? Locals know that when the flow gets to 20 cfs you can walk across the river even near Wiswall dam.
- 2. If Table 1 is the chart to be followed, it was not adequately explained. A better explanation of this table should be prepared and what it means for future management of the river. This should be done PRIOR to the development of the Management Plan.
- 3. We have several concerns regarding the MesoHABSIM model used to predict in-stream flows necessary to support fish and aquatic life. First, the use of this model seems fundamentally flawed by excluding the dams that are present along the Lamprey River. The MaCallam, Wiswall and Folsom Dams will exist into the foreseeable future and will continue to impact the hydrologic regime of the Lamprey. When establishing protected in-stream flows, it seems necessary to model reality and incorporate the role of these dams into any modeling exercise. Second, the ecological variables included in the final MesoHABSIM model for presence/absence should have the same sign in the model for abundance if they are also included in that model. One of the variables was included in both models, but had different signs (positive in one and negative in the other). How can one variable positively influence the presence of fish in one model and then negatively impact the abundance in the other (or vice versa)? These final models should make ecological sense. Finally, the relative importance of the different variables included in the final MesoHABISM models is not evident and this is an important consideration when interpreting the model results. The next version of the report should include the relative importance of variables included in final models.
- 4. The assessment of recreational needs was poorly done. The survey method was limited in location, number of survey participants, and recreational type. The recommended

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Barrington
Deerfield
Candia
Raymond
Freemont
Epping
Brentwood
Exeter
Nottingham
Lee
Newfields
Durham

Newmarket

43 North River Road • Lee, NH 03861 • (603)659-9363 www.lrwa-nh.org • volunteer@lrwa-nh.org minimum flow levels are totally inadequate to meet recreational needs on the river. The logic that led to conclusions such as "swimming is opportunistic" and therefore ineligible for In-stream Flow protection is indefensible.

5. The executive summary is not adequate for describing the background as to the reason for this study and does not do a good job of spelling out the results and ramifications of the decisions. Laypersons must be able to understand this summary and it needs to be better written to convey the principles and findings of the study.

Other questions that the LRWA Board has are:

- 1. When will a third party review be completed on this draft report?
- 2. Who will decide if the minimum flows are being met?
- 3. Will the person/organization who determines that the minimum flow is not being met have the authority to require the release of water to assure minimum flow?
- 4. Now that there are two USGS gaging stations on the Lamprey, will both stations be used to implement the management plan?
- 5. If there are flaws in the model, does it change what the flow should be? After this comment period, if there are changes to the model and subsequent changes to the cfs, will a change be made to the recommended minimum low flow?
- 6. The report appears to say that low flows will be tracked but not until the third season will management intervention occur. Why allow these low-flow occurrences to happen given what is already known about the detrimental effects of low flow?
- 7. Will public water supply needs come before the needs of the river and its inhabitants?
- 8. What are the towns supposed to do about the results of this study? Will it be clear to the towns what their role will be in the maintenance of river flows?
- 9. What will the legal recourses be if the plan is not followed?

Unfortunately, the results of the study need to be better communicated. The report is complicated and not easy for laypersons to understand. (In fact, professionals are having trouble deciphering it.) Many, many people could potentially be affected by the flow levels being proposed for protection. If public participation is to be an important part of this process, each section must be summarized in a simplified manner.

We recognize and appreciate the effort that been made to prepare the report and host hearings, and encourage DES to continue to make public the results of public responses and the third party review.

Thank you,

Carl F. Spang President